

*** * REASONS FOR AMENDMENTS AND REMARKS * ***

Applicants wish to acknowledge with appreciation the Examiner's analysis and efforts in examining this application.

As a preliminary matter, accompanying this Response to the Examiner's Office Action, is an Information Disclosure Statement that includes what is believed to be better renderings of the SMC clamp disclosed in the 8-21-98 brochure.

On page 2 of the Office Action, the Examiner rejected Claims 1-21 under 35 U.S.C. § 102(b) as being anticipated by the APA (SMC W-RF Clamp dated 8-21-98). The Examiner alleges that the SMC clamp discloses the same as the invention being claimed. Further, the Examiner alleges that the piston appears to be the "camming bearing in the middle connected to both arms, links, and cams."

In addition, the Examiner rejected Claims 1-15, 16, and 19-21 under 35 U.S.C. § 102(e) as being anticipated by Moilanen et al. (6,588,816). The Examiner alleges that Moilanen et al. discloses a power clamp having an actuator (4), camming members (47) which is a wedge, a body (30), pivoting arms (12), and bearing members (43).

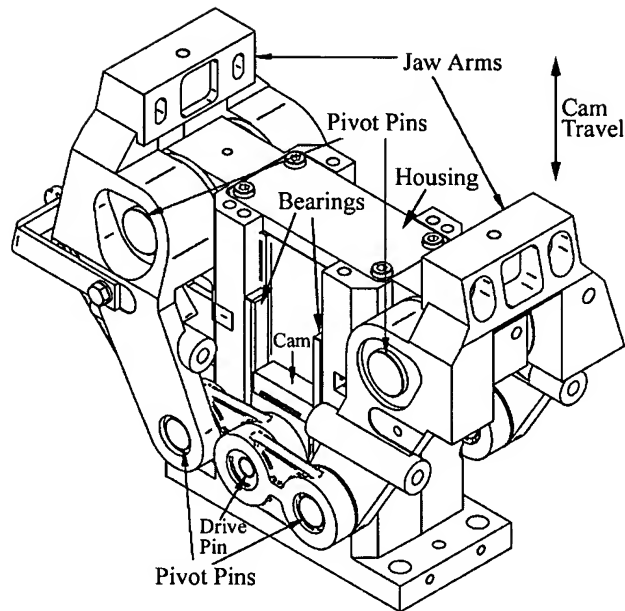
Claim 1

It is respectfully asserted that Claim 1, as amended, does not read on the SMC clamp. Claim 1 includes the limitations of:

a bearing member attached to the jaw arm;

wherein movement of the cam member causes the camming surface to move the bearing member which causes the jaw arm to pivot.

Neither of these limitations exist in the SMC clamp.



As can be seen from both the SMC W-RF clamp brochure and the annotated rendering above, the Examiner is believed correct when alleging that the cam and bearing structures are in the middle of the clamp and are connected to both jaw arms via links. According to the rendering, the cam travels rectilinearly against opposed bearings attached to the housing. In addition, links couple the jaw arms to the cam via a drive pin and pivot pins. Consequently, as the cam moves rectilinearly as indicated by the arrows on the annotated rendering, the cam draws the links either upward or downward, causing the jaw arms to either open and close.

In contrast to the SMC clamp having bearings attached to the housing, the claimed invention recites “a bearing member attached to the jaw arm.” The SMC clamp, therefore, does not include this limitation. Also, the cam of the SMC clamp does not cause any camming surface located thereon to move the bearing members, as required in Claim 1. In fact, the bearings on the SMC clamp do not appear to move at all. Furthermore, the bearings on the SMC clamp do not cause the jaw arm to pivot, as also required by Claim 1. Rather, the cam on the SMC clamp simply draws the links up or down to open or close the jaw arms.

Alternatively, if the Examiner considers the drive pin to be a “bearing member,” the clamp still does not satisfy all the limitations of Claim 1. For example, Claim 1 requires that the bearing member be attached to the jaw arm. As shown in the rendering and brochure, the pivot pins are attached to the jaw arms, and the drive pin is attached to the cam. Also, Claim 1 requires the bearing member to be “engagable with the camming surface of the cam member[.]” The drive pin on the SMC clamp does not engage a camming surface that is part of the cam. Rather, the drive pin moves links that are coupled to the jaw arm. The cam surface on the cam of the SMC clamp engages the bearings attached to the housing. Consequently, the SMC clamp also fails to teach or disclose the “cam member [causing] the camming surface to move the bearing member which causes the jaw arm to pivot” from Claim 1.

Further alternatively, if the Examiner considers the pivot pins to be the “bearing member,” the clamp still does not satisfy all the limitations of Claim 1. In this case, the bearings would be attached to the jaw arms. However, the bearing member would not be “engagable with the camming surface of the cam member” as required by Claim 1. Still further, the camming surface of the cam member would not move the bearing member, as also required by Claim 1.

With respect to the Moilanen reference (“the ‘816 patent”), it is believed that it does not read on the claimed invention. Specifically, the Applicants respectfully disagree with the Examiner’s characterization of certain structures. For example, the Examiner identifies cam pin 47 as “camming members” and the pivoting segments 43 as the “bearing members.”

The specification of the ‘816 patent describes cam pin 47 as having “spherical surfaced bearings 54 are provided on the ends of cam pin 47 to ensure free movement of the cam pin 47 in cam slots 48.” (See col. 7, lns. 3-5, and 50-53)(emphasis added). The specification, therefore, is describing the use of cam pin 47 as a bearing. And even though the Examiner is identifying structure 47 as a “camming member,” Claim 1 of the present invention requires the cam member to have a camming surface. The “bearing member” is a separate

limitation. Consequently, cam pin 47 in the '817 patent is configured to have a bearing surface, not a camming surface. This is further highlighted when examining pivoting segment 43 which the Examiner identifies as a "bearing member." The specification of the '816 patent states, "the central cam slot segments between the locking segments are referred here to central pivoting segments 43." (See col. 6, lns. 18-20)(emphasis added). The figures of the '816 patent confirms this. Reference numeral 43 is identified as a cam slot in Fig. 2 similar to the cam slots 48 shown in Fig. 5. And cam slot 48 receives cam pin 47 (i.e., bearing). The cam slot embodies the cam surfaces.

Accordingly, reference numeral 47 is better characterized as a bearing structure rather than a cam member having a camming surface. Conversely, reference numeral 43 is better characterized as a camming surface rather than a bearing member.

Thus, the '816 patent does not disclose either a cam member attached to the actuator, a bearing member attached to the jaw arm, or the cam member causing the cam surface to move the bearing member which causes the jaw arm to pivot, as required by Claim 1 of the present invention. The gripper disclosed in Fig. 5 of the '816 patent reinforces this position. Accordingly, it is respectfully requested that this rejection be withdrawn as well. Thus, it is respectfully asserted that Claim 1 and all claims dependent thereon are allowable.

Claim 9

This claim has been amended to recite "the first **camming** surface of the cam member" and "the second **camming** surface of the cam member" rather than the first and second **bearing** surfaces, respectively. This was merely a scribner's error and the amendments made thereto simply reflect the original intent of the claim. The first and second camming surfaces have proper antecedent basis with respect to the cam member.

For reasons similar to that recited above, the SMC clamp does not read on Claim 9. In particular, the SMC clamp does not include a cam having first and second camming surfaces that are engagable with first and second bearing members, respectively, which are attached to first and second jaw arms, respectively. Rather, the cam in the SMC clamp engages bearings attached to the housing, as previously discussed. It appears that the Examiner recognized this in his original arguments when describing the SMC clamp having a “camming bearing in the middle connected to both arms, links, and cams.” To any other extent, the Examiner does not argue that the SMC clamp includes multiple bearings each attached to a respective jaw arm, and which are caused to move by engagement with first and second cam surfaces, respectively. Similarly, with respect to the ‘816 patent, it too does not read on Claim 9 for the reasons articulated above or the reasons articulated with respect to Claim 1.

Accordingly, it is respectfully requested that these rejections be withdrawn. It is, thus, respectfully asserted that Claim 9 and all claims dependent thereon are allowable.

Claim 19

This claim has been amended to recite the cam member having a camming surface “which forms a pathway along at least a portion of the outer periphery of the cam member” and that during movement of the cam member in the first direction, the camming surface engages “the bearing member and moves it along the pathway which causes the jaw arm to move.” The SMC clamp does not read on this claim for the reasons previously discussed. In addition, the SMC clamp does not include a camming surface on the cam member that has such a pathway that engages the bearing member which is coupled to the jaw arm to cause the same to move. Rather, the pathways that are disposed on the cam on the SMC clamp engage the bearings that are attached to the housing, rather than the jaw arm. Similarly, with respect to the ‘816 patent, it too does not read on Claim 19 for the reasons previously articulated.

Accordingly, it is respectfully requested that these rejections be withdrawn. And it is respectfully asserted that Claim 19 and all claims dependent thereon are allowable.

Claim 22

The Examiner rejected this claim under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,211,123 (“the ‘123 patent”). The Examiner alleges that the ‘123 patent discloses a powered clamp having at least two arms (34), a wedge (28 and 41), and an actuator (27 and 17). No further description of the patent and analogous limitations in Claim 22 were provided. Nevertheless, the amendments made to Claim 22 include an actuator “having a rod extending therefrom which is movable rectilinearly, . . . a bushing coupled to at least one jaw arm [and] wherein the wedge engages the bushing on the at least one jaw arm . . .” Support for these amendments can be easily ascertained in the specification including Figs. 4-7 and their accompanying descriptions, for example.

The ‘123 patent does not disclose or teach a rod extending from the actuator that is movable rectilinearly and having a wedge attached to the rod that engages a bushing that is coupled to at least one jaw arm. The ‘123 patent, thus, does not read on Claim 22, as amended.

Accordingly, it is respectfully requested that this rejection be withdrawn. And it is, thus, respectfully asserted that Claim 22 is now allowable.

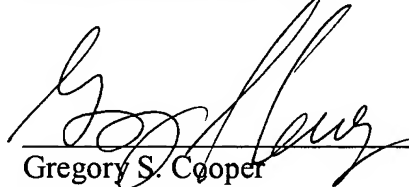
Minor amendments were made to Claims 8, 10, 16 and 17. These amendments were simply made for grammatical consistency and are not related to issues of patentability. Claim 14 has also been amended to include “the first and second camming surfaces of the cam members engage and separate the first and second bearing members respectively . . .” It is respectfully submitted that this limitation is not read upon by any of the prior art, making the claim allowable.

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If, upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved, the Examiner is invited to contact Applicants' patent counsel at the telephone number given below to discuss such issues.

To the extent necessary, a petition for an extension of time under 37 C.F.R. §1.136 is hereby made. To the extent additional fees are required, please charge the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 02-1010 (614359/82663) and please credit any excess fees to such deposit account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gregory S. Cooper", is written over a horizontal line.

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